

Project Specifications

(Special Provisions)

GENERAL REQUIREMENTS, SPECIAL PROVISIONS, AND SUPPLEMENTAL SPECIFICATIONS

For

Invitation to Bid No.: **15-060503-1043**

Project Name: **Bruce Ave Drainage Improvements Phases 3**

City Project Number:

State Project Number:



Description of Work: Sanitary Sewer Replacement

Completion Time Limit **1. All Work to be completed by August 1, 2016**

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Bruce Ave Drainage Improvements Phase 3

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SCHEDULE OF ITEMS **Error! Not a valid link.**

No.	MC	Road and BR. Spec.	ITEM DESCRIPTION	UNIT	QUANTITY	Unit Price	Bid Amount
			Roadway				
1		513	Mobilization	LS	1		
2		517	Construction Surveying	LS	1		
3		301	Clearing and Grubbing	LS	1		
4		315,SP	Asph. Conc. 2" Mill and Overlay	SY	310		
5		315, SP	Asph. Conc. TY. SM-9.5D	TN	340		
6		315, SP	Asph. Conc. TY. BM-25.0A	TN	585		
7		310	Asphalt Tack	GAL	406		
8		308	Aggr. Base TY. 1, No 21B	TN	1780		
9		502	Std. Comb. Curb & Gutter CG-6	LF	2800		
10		502	Rad. Comb. Curb & Gutter CG-6	LF	85		
11		502	Entr. Gutter CG-9D – Modified	SY	130		
12		504, SP	Hydr. Cem. Conc. Sidewalk 4"	SY	45		
13		316	6" Concrete Driveway Replacement	SY	455		
14		502	Removal of Sidewalk and Entrance	SY	500		
15		502	Removal of Comb. Curb & Gutter	LF	3015		
16		508, SP	Demolition of Pavement (Combination)	SY	4258		
17		602	Topsoil, 2" Depth	AC	0.3		
18		603	Seed	LBS	65		
19		603	10-10-10 Fertilizer	TN	0.2		
20		603	Lime	TN	0.6		
21			Inlet Protection	EA	11		
22		601	Tree Removal	EA	3		
23		511	Allaying Dust	HR	100		
			MOT				
24		512	Construction Signs	EA	108		

¹ In the column titled MC, M denotes Major Item, P denotes Plan Quantity

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SCHEDULE OF ITEMS

25		512	Aggregate VDOT 21B	TN	300		
26		512	Group 2 Channelizing Devices	DAY	80		
27		512	Portable Changeable Message Sign	HR	640		
28		512	Flagger Service	HR	640		
			STORM SEWER				
29		510, SP	Remove Existing Storm Structures	EA	13		
30		510, SP	Remove Existing Storm Pipe & Backfill Trench	LF	1006		
31		302	Storm Sewer Pipe 12"	LF	29		
32		302	Storm Sewer Pipe 15"	LF	149		
33		302	Storm Sewer Pipe 18"	LF	244		
34		302	Storm Sewer Pipe 24"	LF	41		
35		302	Storm Sewer Pipe 30"	LF	455		
36		302	Storm Sewer Pipe 36"	LF	307		
37		302	Storm Sewer Pipe 42"	LF	318		
38		302	Storm Sewer Pipe 49" x 29"	LF	36		
39		302	Storm Sewer pipe 53" x 34"	LF	71		
40		302	Drop Inlet, DI-1	EA	1		
41		302	Drop Inlet, DI-2A	EA	3		
42		302	Drop Inlet DI-3A	EA	1		
43		302	Drop Inlet DI-3C, L=6'	EA	1		
44		302	Drop Inlet DI-4A	EA	2		
45		302	Drop Inlet, DI-4C, L=8'	EA	3		
46		302	Drop Inlet, DI-7	EA	1		
47		302	48" Manhole	LF	6		
48		302	72" Manhole	LF	14		
49		302	84" Manhole	LF	9		
50		302	Junction Box, JB-1	EA	1		
51		302	Standard Endwall for Pipe Culverts	CY	0.8		
52		302	Flared End Section	EA	1		

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SCHEDULE OF ITEMS

53		302	Manhole Frame and Cover	EA	6		
54		302	Minor Structure Excavation	CY	715		
			WATER				
55		520, SP	8" C-900 PVC water main	LF	960		
56		520, SP	6" C-900 PVC water main	LF	40		
57		520, SP	Adjust Water Main for Sewer Installation	LS	1		
58		520, SP	Maintain Water Service During Construction	LS	1		
59		520, SP	8" Gate Valve with Valve Box	EA	5		
60		520, SP	Meter Box and Setting	EA	2		
61		520, SP	Water Service Line (2" Dia. And Smaller)	LF	470		
62		520, SP	Remove Existing Waterline & Backfill Trench	LF	950		
63		520, SP	Remove and Replace Existing Fire Hydrant	EA	2		
64		520, SP	Fire Hydrant Assembly	EA	3		
			SANITARY SEWER				
65		520, SP	8" SDR-35 Sanitary Sewer	LF	781		
66		520, SP	8" DIP Sanitary Sewer	LF	77		
67		520, SP	Sanitary Sewer Cleanout	EA	23		
68		520, SP	Sanitary Sewer Lateral	LF	575		
69		520, SP	48" Manhole	LF	37		
70		520, SP	Manhole Frame and Cover	EA	5		
71		520, SP	Remove Existing Sanitary Sewer	LF	781		
72		520, SP	Manhole Reconstruction	EA	1		
73		520, SP	Remove Manhole	EA	3		
74		520, SP	Maintain Gravity Sewer Service During Construction	LS	1		
TOTAL BID							

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SCHEDULE OF ITEMS

DATE	SIGNATURE	TITLE	COMPANY
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¹ In the column titled MC, M denotes Major Item, P denotes Plan Quantity

GENERAL REQUIREMENTS

The Supplemental Specifications (SSs), Special Provisions (SPs) and/or Special Provision Copied Notes (SPCNs) contained in this contract document assembly titled "Separate-Cover Contract Documents" are a binding part of the contract document assembly titled "**Bruce Avenue Drainage Improvements,**" which it accompanies, and each SS, SP, and SPCN carries the same status in the Contract as that stated in Section 105.12 of the Virginia Department of Transportation's Road and Bridge Specifications.

GENERAL PROJECT REQUIREMENTS, SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS

This project shall be constructed in accordance with the following:

- Virginia Department of Transportation (VDOT) Road and Bridge Specifications, dated 2007
- Road and Bridge Standards, dated 2008;
- Virginia Work Area Protection Manual, dated May 1, 2005;
- VDOT Supplemental Specifications, Special Provisions and Special Provision Copied Notes as modified by the City of Colonial Heights, Virginia and unique specifications or special provisions incorporated by the City of Colonial Heights, Virginia.

COMPLETION TIME LIMIT

The Contract Time Limit on this Project is as follows:

1. All Work to be completed before August 1, 2016.

OPERATIONS BY CITY FORCES

The Contractor is advised that City Forces may furnish materials for and perform certain items of work, indicated on the plans to be performed by City Forces, throughout the life of this contract. The City will perform its operations in such a manner as to minimize interference with the Contractor's operations, and the Contractor shall coordinate his activities with the City in order to prevent unnecessary interference.

PROJECT COMMUNICATION AND DECISION MAKING

I. DESCRIPTION

The intent of this provision is to establish procedures, processes and guidelines for making decisions and managing communications regarding work under contract on construction and maintenance projects. The information contained herein is not meant to be all inclusive but to serve as a minimal general framework for promoting efficient and effective communication and decision making at both the project and, if needed, executive administrative level. It is also not meant to override the decision-making processes or timeframes of specific contract requirements.

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II. DEFINITIONS

For the purposes of this provision, the following terms will apply and be defined as follows:

Submittals – Documents required by the contract that the Contractor must submit for the Department's review, acceptance or approval. These may include shop drawings, working drawings, material test reports, material certifications, project progress schedules, and schedule updates. The Contractor shall produce submittals as early as practicable when required by the contract so as not to delay review and determination of action.

Confirmation of verbal instructions (COVI) - Contractor requested written confirmation of agreements and instructions developed in negotiations with the Department concerning the Work under contract. Agreements must be able to be quantified using existing contract procedures and will, in the vast majority of cases, not impact contract time and cost. When time and/or cost are impacted, they must be clearly spelled out in the COVI.

Requests for information (RFI) – Requests generated by either the Contractor or the Department that the other party supplies information to better understand or clarify a certain aspect of the Work.

Requests for owner action (ROA) – Requests when the Contractor asks that the Department take certain action(s) the Contractor feels is required for proper completion of a portion of the Work or project completion.

Contract change requests (CCR) - Request where the Contractor asks the Department to make an equitable adjustment to the contract because of excusable and/or compensable events, instructions that have or have not been given or other work requiring time and/or cost beyond that specified or envisioned within the original contract.

Requests for contractor action (RCA) – Request generated by the Department where the Department asks the Contractor to take certain action that is in the best interests of the project and/or is required for proper completion of a portion of the Work or for project completion.

Contract change directives (CCD) – Directive by the Department which instructs the Contractor to perform work beyond that specified or envisioned in the original contract and which may specify instructions, time, and cost(s) to make an equitable adjustment to the original contract.

Responsible Person – The individual in the normal or escalated resolution process, for either the Contractor or the Department, having the direct authority, responsibility and accountability to formulate and respond to each category of information request.

III. PROCESS FOR DECISION MAKING

Project teams composed of responsible individuals directly involved in the administration, prosecution, and inspection of the Work from the Contractor and the Department shall define and agree upon the field decision-making process during the pre-construction conference. This information relative to the process should be written down and distributed to all parties of the process once it is established. Where there are responsibility, authority or personnel changes associated with this process such changes shall be distributed to all affected parties as quickly as practicable after they are effective so as not to delay or impede this process.

The process for making field decisions with respect to the Work detailed in the contract basically requires the following steps:

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1. The Contractor and the Engineer agree on the decision-making process, the identity, authority and accountability of the individuals involved and on the cycle times for response for each category of decision.
2. The party requiring the information generates the appropriate request documents, and calls for a decision from the individual who is accountable for the particular facet of the Work under consideration within the agreed period.
3. The responding party has an internal decision-making process that supports the individual who is accountable and provides the information required within the agreed period for each category of request.
4. The party receiving the decision has an internal process for accepting the decision or referring it for further action within an agreed period of time.

The process also requires that clear and well-understood mechanisms be in place to log and track requests, document the age and status of outstanding requests and actions to be taken on requests that have not been answered within the agreed period.

Both the Department and the Contractor shall agree on the following:

- The documentation and perhaps format to be developed for each category of information requested,
- The name (as opposed to organizational position) of all individuals with the responsibility, authority and accountability to formulate and respond to each category of information requested. The City Engineer (CE) or Chief Executive Officer (CEO) of the Contractor may delegate the responsibility and authority for formulating and responding to requests, however, the accountability for meeting the established response time(s) remains with the CE and CEO.
- The cycle times for each stage in the decision-making process,
- The performance measures to be used to manage the process,
- The action to be taken if cycle times are not achieved and information is not provided in a timely manner.

The following general guideline and timeframe matrix will apply to the various requests for action. Again, please note these guidelines are general in scope and may not apply to specific contract timeframes for response identified within the requirements of the Contract documents. In such cases, specific contract requirements for information shall apply.

Bruce Avenue Drainage Improvements Phases 3&4 - Project Specifications

PROCESS GUIDELINES FOR REQUESTS GENERATED BY THE CONTRACTOR

Process	Situation	Normal resolution process		Established process		Final resolution
		By	Within (calendar days)	By	Within	
Submittal	Where the Contractor requests the Department's review, acceptance or approval of shop drawings, materials data, test reports, project progress schedules, or other submittals required by standard Specifications or other contract language.	Department's Designated Project Manager	Acknowledge: 3 days ¹ Accept or Return: 14 days Final Determination/ Approve: 30 days or as outlined in contract documents.	CE or their designee*	7 days	Submit ROA or CCR
Confirmation of Verbal Instruction (COVI)	Resolving routine field issues, within the framework of the Contract, in negotiation with Owner field personnel.	Department's Appropriate field personnel	Confirmation: 1 day ²	Submit RFI, ROA or CCR	7 days	(See process for RFI, ROA, or CCR)
Request for Information (RFI)	Requests the Department to supply information to better understand or clarify a certain aspect of the work.	Department's Designated Project Manager	Action: 14 days (or appropriate Action Plan)	CE or their designee*	7 days	Submit ROA or CCR
Request for Owner Action (ROA)	Requests that the Department take certain action the Contractor feels is required for proper completion of a portion of the Work or project completion.	Department's Designated Project Manager	Acknowledge: 3 days ¹ Accept : 14 days (or appropriate Action Plan)	CE or their designee*	7 days	Submit CCR
Contract Change Request (CCR)	Requests the Department to make an equitable adjustment to the contract because of excusable and/or compensable events, instructions that have or have not been given or other work requiring time and/or cost beyond that specified or envisioned within the original contract.	Department's Designated Project Manager	Acknowledge: 3 days ¹ Action : 30 days (45 days if federal oversight project)	CE or their designee*	7 days	Established dispute resolution and claims process

¹ Process initiated on the last business day of a week shall be acknowledged before 5 p m on next City business day.

² The absence of a written confirmation from the Owner to a Contractor's written request for confirmation of a verbal instruction shall constitute confirmation of the verbal instruction.

Bruce Avenue Drainage Improvements Phases 3&4 - Project Specifications

PROCESS GUIDELINES FOR REQUESTS GENERATED BY THE OWNER

Process	Situation	Normal resolution process		Established process		Final resolution
		By	Within (calendar days)	By	Within	
1. RFI	Requests the Contractor to supply information to better understand or clarify a certain aspect of the work. (RFI)	Contractor's Project Superintendent	Action: 14 days (or appropriate written Action Plan)	Contractor's Project Manager	7 days	Submit RCA or CCD
2. RCA	Requesting the Contractor take certain action(s) that is in the best interests of the project and/or is required for proper completion of a portion of the work or for project completion. (RCA)	Contractor's Project Superintendent	Response or Action to safety and environmental issues; 1 day Otherwise acknowledge: 3 days ¹ Action: 14 days (or appropriate Action Plan)	Contractor's Project Manager	7 days	Submit CCD
3. CCD	Instructs the Contractor to perform work beyond that specified or envisioned in the original contract and undertakes action(s) to make an equitable adjustment to the contract. (CCD)	Contractor's Project Superintendent	Acknowledge: 3 days ¹ Action: 30 days	CEO or their designee**	7 days	Established dispute resolution and termination process

¹ Process initiated on the last business day of a week shall be acknowledged before 5 p.m. on next project business day.

Division I—GENERAL PROVISIONS

Comply with Division I of the Road and Bridge Specifications as follows:

SECTION 101—DEFINITIONS OF ABBREVIATIONS, ACRONYMS, AND TERMS

Section 101 of the Road and Bridge Specifications is amended as follows:

101.0—Terms

Modify and/or add the items as follows:

Board, Commonwealth Transportation. This term shall be interpreted as the Council of the City of Colonial Heights, Virginia.

Commissioner. This term shall be interpreted as the City Manager of the City of Colonial Heights, Virginia.

Commonwealth. Unless otherwise noted, this term shall be interpreted as the City of Colonial Heights, Virginia.

Contract. Replace “Department” with “City of Colonial Heights.”

Contractor. Replace “Department” with “City of Colonial Heights.”

Department. Unless otherwise specified, this term shall be interpreted as the Department of Public Works of the City of Colonial Heights or the Virginia Department of Transportation as the context indicates.

Engineer. This term including, but not limited to “Chief Engineer”, “Area Construction Engineer”, etc. shall be interpreted as the City Engineer for the City of Colonial Heights, Virginia.

Engineer, Contract. Unless otherwise specified, this term shall be interpreted as the City Purchasing Agent for the City of Colonial Heights, Virginia.

Execution date. Replace “Chief Engineer” with “City Manager or City Purchasing Agent.”

Laboratory. For this term, “Department” shall be interpreted as the Virginia Department of Transportation.

Liquidated damages. For this term, “Department” shall be interpreted as the City of Colonial Heights.

Project Manager. The Engineer's representative who directly supervises the engineering and administration of a Contract.

Proposal. For this term, “Department” shall be interpreted as the City of Colonial Heights.

Road and Bridge Specifications. Replace “Commonwealth Transportation Board or the Commonwealth Transportation Commissioner” with “City Manager or the City Purchasing Agent.”

Standard drawings. For this term, “Department” shall be interpreted as the Virginia Department of Transportation and the “Road and Bridge Standards” shall be interpreted as the Virginia Department of Transportation Road and Bridge Standards as modified by the Department of Public Works of the City of Colonial heights, Virginia.

Vouchered. Replace “State Comptroller” with “Finance Department of the City of Colonial Heights.”

SECTION 102—BIDDING REQUIREMENTS AND CONDITIONS

Section 102 of the Road and Bridge Specifications is amended as follows:

102.02—Content of Proposal

In this section, “Department” shall be interpreted as “City Purchasing Agent.”

102.04—Examination of Site of Work and Proposal

(a) Subsurface Data

Replace the first sentence with the following:

No geotechnical report/information is available for review.

(c) Notice of Alleged Ambiguities

Delete the first paragraph and replace with the following:

In the event a word, phrase, clause, or other portion of the plans, specifications, or other contract documents is alleged to be ambiguous, the Bidder shall submit to the City Purchasing Agent a written notice of same at least 7 days prior to the date of receipt of bids, and request an interpretation thereof.

102.05—Preparation of Bid

In this section, “Department” shall be interpreted as “City Purchasing Agent.”

(a) General

In the first sentence of the third paragraph, replace “electronic” with “printed.” In the last sentence, replace “digital” with “ink.” Delete the sixth paragraph.

c) Debarred Suppliers

Insert “VDOT” before “Form C-48.”

(e) Acknowledgement of Receipt of Revisions

In the first sentence, delete “electronic.”

f) Signing the Bid

In the first sentence, replace “digital” with “written.”

102.07—Proposal Guaranty

For the purposes of this section, “Department” shall be interpreted as the “City Purchasing Agent.”

In the first sentence, replace “\$250,000” with “\$50,000” and replace “Treasurer of” with “Colonial Heights.”

102.08—Disqualification of Bidders

(g) Replace “Department” with “City Purchasing Agent.”

(j) Replace “Department” with “City Purchasing Agent.”

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102.09—Submission of Bid

In this section, “Department” shall be interpreted as “City Purchasing Agent.”

Delete the last sentence of the first paragraph.

102.10—Withdrawal of Bid

(a) Standard Withdrawal:

In the first sentence, delete “as allowed by the electronic bidding system”

(b) Conditional Withdrawal:

Replace “completing the portion of the electronic bid for the conditional withdrawal of bids” with “by notifying the City Purchasing Agent.”

102.11—eVA Business-To-Government Vendor Registration

Delete this subsection.

102.12—Public Opening of Bids

Delete this subsection.

SECTION 103—AWARD AND EXECUTION OF CONTRACTS

Section 103 of the Road and Bridge Specifications is amended as follows:

103.01—Consideration of Bids

In this section, “Department” shall be interpreted as “City Purchasing Agent.”

103.05—Requirements of Contract Bond

In the first sentence of the first and second paragraphs, replace “\$250,000” with “\$50,000.”

103.06—Contract Documents

In this section, “Department” shall be interpreted as “City Purchasing Agent.”

(e) Progress Schedule: Delete this list item.

103.07—Failure to Furnish Bonds or Certificate of Insurance

In this section, “Department” shall be interpreted as “City Purchasing Agent.”

103.08—Contract Audit

In this section, “Department” shall be interpreted as “City Purchasing Agent.”

103.09—Execution of Contract

In the first sentence, replace “Department” with “City Purchasing Agent.”

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130.10—Project Site Restriction

Add this subsection at the end of this section.

Until the Department sends the Contractor written Notice to Proceed with the Work, and the Contractor has filed the public works bonds and insurance required, the Contractor shall not go onto the site of the Project on which the Work is to be done, nor move Materials, Equipment, or workers onto that site.

SECTION 105—CONTROL OF WORK

Section 105 of the Road and Bridge Specifications is amended as follows:

105.01—Notice to Proceed

Replace this subsection with the following:

The Department will issue Notice to Proceed within seven (7) Calendar Days after the Contract is executed. Contract Time will commence on the date of the Notice to Proceed.

In no case shall any work begin before the City executes the Contract. The Contractor shall notify the Engineer at least 48 hours prior to the date on which he plans to begin onsite work.

The Department will contact the Contractor after award of the Contract to arrange a pre-construction conference.

105.03—Authorities of Project Personnel

(a) Authority of Engineer

Add the following at the beginning of this list item:

The Engineer has full authority over the Work and its suspension. The Contractor shall perform all Work to the complete satisfaction of the Engineer. The Engineer's determination shall be final on all matters involving performance of the Contract. Work performed under the Contract will not be considered complete until it has passed Final Inspection by the Engineer and has been accepted by the City.

The Engineer may designate a Project Manager as its representative on the Project with authority to enforce the provisions of the Contract. When the Engineer has designated a Project Manager, the Contractor should direct all requests for clarification or interpretation of the Contract, in writing, to the Project Manager. The Project Manager will respond in accordance with the process guidelines in PROJECT COMMUNICAITON AND DECISION MAKING. Contract clarification or interpretation obtained from persons other than the Project Manager will not be binding on the Agency. The Project Manager shall have the authority to appoint other personnel as required to assist in the administration of the Contract.

105.06—Subcontracting

Replace the first paragraph with the following:

No portion of the Contract shall be subcontracted or otherwise disposed of without the written consent of the Engineer. The Contractor shall notify the Engineer of the name of the firms to whom the work

Bruce Avenue Drainage Improvements Phases 3&4 - Project Specifications

will be subcontracted, and the amount and items of work involved. Such notification shall be submitted at the Preconstruction Conference.

105.07—Cooperation of Contractor

Add the following at the end of this subsection:

The Contractor shall appoint a single designated representative, the Superintendant, responsible for the Project described in writing.

The Contractor's failure to provide the superintendence required by these provisions constitutes a material breach of the Contract, and the Engineer may impose any remedies available under the Contract, including but not limited to Contract termination or suspension of Contract performance.

105.10—Plans and Working Drawings

(a) General

In the last sentence of the first paragraph, "State Contract Engineer" shall be interpreted as the appropriate VDOT official.

(b) Plans

Delete the first paragraph including the embedded table.

105.14—Maintenance during Construction

Add the following at the beginning of this subsection:

The Contractor's responsibilities for maintenance during construction begin on the day any onsite work begins within the limits of the Project.

(a) Detours

In the third sentence of this list item, replace "state" with "city." Delete the fourth sentence.

(e) Connections and Entrances:

Add the following:

Stabilization and surfacing materials for connections and entrances shall be paid for at the contract unit price.

Add the following at the end of this subsection:

(m) Trenches

The Contractor shall completely backfill trenches before the end of the work shift. When, in the opinion of the Engineer, pipe backfill cannot be reasonably achieved by the end of a work shift and the placement of temporary plating is impractical or infeasible, the contractor shall provide additional temporary traffic control measures, including flagging required by the Engineer at the Contractor's expense.

When performing trench excavation or other excavation across or adjacent to a travel lane on a roadway, the Contractor shall backfill the excavation, install surfacing, and open the roadway to traffic by the end of each work shift. In addition, the Contractor

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shall install a "BUMP" (W8-1-36) sign approximately 100 feet before the backfilled area and a "ROUGH ROAD" (W8-8-36) sign approximately 200 feet ahead of the "BUMP" sign. If this requirement is not met, the Contractor shall maintain all necessary lane or shoulder closures and provide additional traffic control devices, including flagging, at no additional cost to the City. Temporary steel plating to reopen the roadway shall not be used if the pre-construction speed exceeds 35 MPH.

105.15—Removing and Disposing of Structures and Obstructions

(b) Mailboxes and Newspaper Boxes

Delete this subsection and replace with the following:

When removal of existing mailboxes and newspaper boxes is made necessary by construction operations, the Contractor shall place them in temporary locations so that access to them will not be impaired. Prior to final acceptance, boxes shall be placed in their permanent locations as designated by the Engineer and left in as good condition as when found. Boxes or their supports that are damaged through negligence on the part of the Contractor shall be replaced at his expense. The cost of removing and resetting existing boxes shall be included in other pay items of the Contract. New mailboxes designated in the plans shall be paid for in accordance with the provisions of Section 521 of the Specifications.

SECTION 106—CONTROL OF MATERIAL

Section 106 of the Road and Bridge Specifications is amended as follows:

106.01—Source of Supply and Quality Requirements

In the first paragraph, replace the third sentence with the following:

Not later than seven (7) days before the date of the Preconstruction Conference, the Contractor shall submit a statement of the known origin, composition and manufacture of all materials to be used in the work, including optional or alternate items.

In the last sentence of the first paragraph, delete "electronically" and insert "VDOT" before "Form C-24."

106.02—Material Delivery

Delete the first sentence of this subsection.

SECTION 107—LEGAL RESPONSIBILITIES

Section 107 of the Road and Bridge Specifications is amended as follows:

107.13—Labor and Wages

In the first sentence of this list item, insert "VDOT" before "C-28."

107.14—Equal Employment Opportunity

In list item (g), insert "VDOT" before "Form C-57."

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107.16—Environmental Stipulations

(b) **Pollution:**

3. **Noise**

In the first paragraph, replace “80 decibels” with “75 decibels.” In the third paragraph, replace “6 A.M.” with “7 A.M.”

(e) **Storm Water Pollution Prevention Plan**

Replace this list item with the following:

STORM WATER POLLUTION PREVENTION PLAN

INTRODUCTION

The Storm Water Pollution Prevention Plan (SWPPP) is comprised of, but not limited to, the Erosion and Sediment Control (ESC) Plan, the Stormwater Management (SWM) Plan and related Specifications and Standards contained within all contract documents and shall be required for all land-disturbing activities that disturb 10,000 square feet or greater, or 2,500 square feet (930 square meters or greater, or 232 square meters) or greater in Tidewater, Virginia. For the purposes of identifying the affected regions assigned to this designation and the requirements therein Tidewater, Virginia is defined as the Counties of Accomack, Arlington, Caroline, Charles City, Chesterfield, Essex, Fairfax, Gloucester, Hanover, Henrico, Isle of Wight, James City, King George, King and Queen, King William, Lancaster, Mathews, Middlesex, New Kent, Northampton, Northumberland, Prince George, Prince William, Richmond, Spotsylvania, Stafford, Surry, Westmoreland and York and the Cities of Alexandria, Chesapeake, Colonial Heights, Fairfax, Falls Church, Fredericksburg, Hampton, Hopewell, Newport News, Norfolk, Petersburg, Poquoson, Portsmouth, Richmond, Suffolk, Virginia Beach and Williamsburg.

For land-disturbing activities that disturb 1 acre or greater, or 2500 square feet or greater (.4 hectare or greater, or 232 square meters or greater) in an area designated as a Chesapeake Bay Preservation Area, coverage under the Department of Conservation and Recreation’s Virginia Stormwater Management Program (VSMP) General Construction Permit DCR-01 is required. Where applicable, the Department will apply for and retain coverage under this permit for the land disturbing activity. The requirements of this permit will be satisfied by the Contractor’s compliance with the project’s SWPPP terms and conditions.

The Engineer shall ensure that the SWPPP is kept on the project site at all times and shall be available for review upon request.

The Contractor shall be responsible for reading, understanding, and complying with the terms and conditions of the DCR-01 General Permit and the project’s SWPPP as follows:

I. **Project Implementation Responsibilities**

The Contractor shall be responsible for the installation, maintenance, inspection, and ensuring the functionality of all erosion and sediment control measures on a daily basis and all other stormwater and pollutant runoff control measures identified within or referenced within the plans, Specifications, permits, and other contract documents.

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The Contractor shall take all reasonable steps to prevent or minimize any stormwater or non-stormwater discharge that will have a reasonable likelihood of adversely affecting human health or public and/or private properties.

II. Certification Requirements

In addition to satisfying the personnel certification requirements contained in Section 107.16(a) of the Specifications the Contractor shall certify his activities by completing, signing, and submitting Form C-45 VDOT SWPPP Contractor and Subcontractor Certification Statement to the Engineer at least 7 days prior to commencing any project related land-disturbing activities, both on-site and off-site.

III. Off Site (Outside the Construction Limits) Requirements

The Contractor shall develop erosion and sediment control plan(s) and stormwater pollution prevention plan(s) for submission and acceptance by the Engineer prior to usage of any support facilities, off-site borrow and disposal areas, construction materials or equipment storage areas, and any other areas that may generate a stormwater or non-stormwater discharge directly related to the construction process. Such plans, upon acceptance, shall become a part of and subject to the overall project plan, the VSMP General Construction Permit, and all other contract requirements.

IV. Reporting Procedures

A. Inspection Requirements

The Contractor shall be responsible for conducting inspections in accordance with the requirements of Section 107.16(a) of the Specifications. The Contractor shall document such inspections by completion of Form C-107 (a) and (b), Construction Runoff Control Inspection Form and Continuation Sheet, in strict accordance with the directions contained within the form.

B. Unauthorized Discharge Requirements

The Contractor shall not discharge into state waters sewage, industrial wastes, other wastes or any noxious or deleterious substances nor shall otherwise alter the physical, chemical, or biological properties of such waters that render such waters detrimental for or to domestic use, industrial consumption, recreational or other public uses.

(1) Notification of non-compliant discharges

The Contractor shall immediately notify the Engineer upon the discovery of or potential of any unauthorized, unusual, extraordinary, or non-compliant discharge from the land disturbing activity. Where immediate notification is not possible, such notification shall be not later than 24 hours after said discovery.

(2) Detailed report requirements for non-compliant discharges

The Contractor shall submit to the Engineer within 5 days of the discovery of the any actual or potential non-compliant discharge a written report describing details of the discharge to include its volume, location, cause, and any apparent or potential effects on private and/or public properties and state waters or endangerment to public health, as well as steps being taken to eliminate the discharge. A completed Form C-107 (a) and (b) shall be used for such reports.

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V. Plans, Changes, Deficiencies and Revisions

A. Contractor SWPPP

The Contractor shall develop and provide a SWPPP that documents the location and description of potential pollutant sources such as vehicle fueling areas, storage areas for fertilizers or chemicals, sanitary waste facilities, construction and waste material storage areas, etc. prior to any such pollutant sources being established on the project site. Such plans and documentation shall include a description of the controls to reduce, prevent and control pollutants from these sources including spill prevention and response. The Contractor shall submit such plans and documentation as specified herein to the Engineer and, upon review and approval, they shall immediately become a component of the project's SWPPP and subject to all corresponding requirements contained therein.

B. Changes and Deficiencies

The Contractor shall report to the Engineer when any planned physical alterations or additions are made to the land disturbing activity or deficiencies in the project plans or contract documents are discovered that could significantly change the nature or increase the quantity of the pollutants discharged from the land disturbing activity to surface waters.

C. Revisions to the SWPPP

Where site conditions or construction sequencing or scheduling necessitates revisions or modifications to the erosion and sediment control plan or other any other component of the SWPPP for the land disturbing activity, such revisions or modifications shall be approved by the Engineer and shall be documented by the Contractor on a designated plan set (Record Set). Such plans shall be kept on the project site at all times and shall be available for review upon request.

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C-45

CITY OF COLONIAL HEIGHTS

Stormwater Pollution Prevention Plan (SWPPP)

Contractor and Subcontractor Certification Statement

Order No.: _____ Project Number: _____

Route: _____ Contract ID. #: _____

I certify under penalty of law that I understand the terms and conditions of the project contract, plans, permits, specifications and standards related to the erosion and sediment control, stormwater management and stormwater pollution prevention plan requirements for the affected activities associated with this project, the Virginia Stormwater Management Program (VSMP), and the General Construction Permit (DCR01), if applicable to this project, issued by the Virginia Department of Conservation and Recreation. The VSMP Permit authorizes the storm water discharges associated with the construction activities from the project site identified and described in the bid documents and subsequent contract including any off-site support activities required for the complete fulfillment of the work therein.

Signature: _____

Name: _____

Title: _____

Contracting Firm: _____

Address: _____

Phone Number: _____

Address/Description of Site: _____

(Include off-site areas) _____

Certified on this date: _____

(Note: This form must be returned with performance and payment bonds)

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107.21—Size and Weight Limitations

Add the following at the end of this subsection:

(d) Construction

Loading of Structures: In the construction, reconstruction, widening, or repair of bridge, culvert, retaining wall and other similar type structures including approaches, the Contractor shall consider construction loads during the planning and prosecution of the work. If the loading capacity of these type structure(s) is not shown in the contract documents, the Contractor is responsible for contacting Engineer to obtain the loading capacity information. Construction loads include but are not limited to the weight of cranes, trucks, other heavy construction or material delivery equipment, as well as the delivery or storage of materials placed on or adjacent to the structure or parts thereof during the various stages (phases) of the work in accordance with the Contractor's proposed work plan. The Contractor shall consider the effect(s) of construction loads on the loading capacity of these type structure(s) in his sequencing of the work and operations, including phase construction. At the Engineer's request the Contractor shall be prepared to discuss or review his proposed operations with the Engineer with regard to construction loads to demonstrate he has taken such into consideration in the planning and execution of the work.

SECTION 108—PROSECUTION AND PROGRESS OF WORK

Section 108 of the Road and Bridge Specifications is amended as follows:

108.01—Prosecution of Work

Delete the first paragraph and replace with the following:

The Contractor shall not commence the Work until the Engineer issues Notice to Proceed.

108.02—Limitation of Operations

(a) General

Add the following after the first paragraph:

The Contractor shall provide the Project Manager and residents, businesses and other occupants of property abutting public streets or alleys with written notice at least one (1) week notice in advance of commencing any work that would prevent ingress and egress by motorists, pedestrians, or service vehicles.

The Contractor shall adjust construction operations to coordinate the adjustment, relocation and/or support of pole lines, underground lines, vaults, and other equipment with utility owners and operators as required by the Engineer.

Contractor shall contact Allied Waste Co. and Tidewater Fiber Co. to coordinate operations with collection services on Wednesday and Friday of each week, respectively to avoid disruption and inconvenience to the maximum extent possible.

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(b) Holidays

Delete the paragraph and substitute the following:

Except as is necessary to maintain traffic, work shall not be performed from 7 PM Fridays through 7 AM Mondays or the following holidays without the permission of the Engineer: January 1, Good Friday, Easter, Memorial Day, July 4, Labor Day, Veteran's Day, Thanksgiving Day, Day after Thanksgiving, Day before Christmas and Christmas Day.

Add the following list item at the end of this subsection:

(c) On-Site Work

The Contractor shall not begin on-site work until the Contractor has:

- Received Notice to Proceed from the Engineer;
- Received approval of subcontracts and material suppliers;
- Approved Working Drawings, Contractor Provided Designs and Utility Maintenance of Service Plans;
- An approved Work Plan, Baseline Progress Schedule and Earnings Schedule;
- An approved Traffic Control Plan and/or Alternative Traffic Control Plan;
- An approved Stormwater Management Program Plan (SWMPP), if required;
- An approved Erosion and Sediment Control Plan, if required;
- Met with the Engineer at the required preconstruction conference; and
- Assembled all materials, equipment, and labor on the project site, or has reasonably assured that they will arrive on the project site, so the Work can proceed according to the Baseline Progress Schedule.

108.03—Progress Schedule General Requirements

Replace this subsection with the following:

PROGRESS SCHEDULE FOR CATEGORY II PROJECTS

I. GENERAL REQUIREMENTS

The Contractor shall plan and schedule the work and shall submit his initial plan in the form of a Baseline Progress Schedule for the Engineer's review and acceptance. Upon acceptance, the Progress Schedule shall become the project Schedule of Record (SOR). The Contractor shall maintain the SOR regularly to ensure that the schedule continues to represent the Contractor's current actual work plan and progress. The SOR shall be used by the Engineer for planning and coordination of the Department activities, and for evaluation of the Contractor's progress and the effects of impacts on the project.

Prior to preparing the schedule, the Engineer or the Contractor may request a schedule development planning meeting to discuss any project specific items required for preparation of the progress schedule. The Contractor shall prepare and submit a practicable schedule to reflect a logical progress of the work. The Progress Schedule shall represent the Contractor's overall work plan to accomplish the entire scope of work in accordance with the requirements of the Contract. It shall include all items of work required for coordination and inspection and to show progress of the work including, but not limited to the

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controlling items of work and other relevant time-based tasks required for timely completion of the work, including as applicable, the work to be performed by sub-contractors, suppliers, the Department, and/or others. When preparing the schedule, the Contractor shall consider all known constraints and restrictions such as holidays, seasonal, weather, traffic, utility, railroad, right-of-way, environmental, permits, or other limitations to the work.

The Contractor may be required, as determined by the Engineer, to attend a scheduling conference. If required, the scheduling conference may be held in conjunction with the pre-construction conference or at a separate meeting called by the Engineer. The Contractor shall be prepared to discuss his planned or contemplated operations relative to the contract requirements and this special provision. Until the Baseline Progress Schedule is accepted by the Engineer, the Contractor shall keep the Engineer informed of his planned or contemplated operations on a continuing basis.

II. PROGRESS SCHEDULE SUBMITTAL REQUIREMENTS

Baseline Progress Schedule – The Contractor shall submit to the Engineer his initial progress schedule in the form of a Baseline Progress Schedule at least seven (7) calendar days prior to Pre-construction Conference. The Baseline Progress Schedule submittal shall include three (3) sets of the written Progress Schedule Narrative as specified below:

1. Progress Schedule Narrative: The Progress Schedule Narrative shall consist of the following written information:
 - a) A description of the Contractor's overall plan of operations in terms of:
 - i) The proposed overall sequence of construction;
 - ii) The general procedures for completing each feature or major operation;
 - iii) Planned resources in terms of number and types of crew and equipment;
 - iv) Anticipated daily production rates for each major operation;
 - b) A Tabular Milestone Schedule to establish interim milestones to complete each phase or stage of work, feature, major traffic switch, or other milestone dates specified in the Contract or required to assess progress of the work;
 - c) A description of the proposed working calendar to indicate the number of work days per week, number of shifts per day, and number of hours per day as well as the anticipated number of non-working days per month with considerations for:
 - i) Holidays;
 - ii) Normal weather conditions;
 - iii) Known constraints and restrictions (i.e. traffic, local events, time of year, environmental, permits, utility, etc.);
 - d) A description of any potential issues that may impact the schedule.

III. REVIEW AND ACCEPTANCE

The Engineer will review all progress schedule submittals within seven (7) calendar days of receipt of the Contractor's complete submittal. The progress schedule submittal shall be considered complete only when all required submittal items and schedule information as defined herein are provided. Acceptance by the Engineer will be based on completeness and conformance with the requirements of this provision

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and the Contract. Such contract requirements may include phasing, sequence of construction, Maintenance of Traffic (MOT), interim milestone(s), or other specified constraints or restrictions.

If the Contractor's progress schedule is deemed to be unacceptable, the Engineer will issue a written notification of non-conformance or incompleteness with a request for resubmission. The Engineer's response will include comments describing the deficiencies prompting the Engineer's decision.

If the Contractor's progress schedule is deemed to be acceptable, the Engineer will issue a written notice of acceptance that may include comments or concerns on the schedule or a request for clarification. When the Engineer's responses include any comments, concerns, or requests for clarification, the Contractor shall respond accordingly within seven (7) calendar days of receipt of the Engineer's response. Failure on the part of the Contractor to respond to the Engineer may adversely affect the Engineer's ability to completely evaluate the Contractor's schedule.

Upon acceptance, the Baseline or Revised Progress Schedule will become the Schedule of Record (SOR) and will replace any previous SOR. For the purposes of this Special Provision the SOR is defined as the currently accepted progress schedule by which all schedule references will be made and progress will be compared. The currently accepted Progress Schedule Update will not replace the SOR, but will be used as the contemporaneous schedule with which to assess current progress, and to evaluate the effects of any time-related changes or impacts on the work.

Review and acceptance by the Engineer will not constitute a waiver of any contract requirements and will in no way assign responsibilities of the work plan, scheduling assumptions, and validity of the schedule to the Department. Failure of the Contractor to include in the Progress Schedule any element of work required by the Contract for timely completion of the project will not excuse the Contractor from completing the entire scope of work within the Contract specified completion milestone(s).

IV. MONITORING THE WORK AND ASSESSING PROGRESS

Monitoring The Work – The Engineer will monitor the work regularly to identify any deviations from the Contractor's scheduled performance relative to the SOR. The Engineer may request a meeting with the Contractor to discuss the Contractor's current progress or to review the approximate date for starting each critical inspection stage during the following thirty (30) days. At least once a week, the Contractor shall advise the Engineer of the approximate timing for anticipated critical stages for the subsequent week. The Contractor must advise the Engineer at least twenty-four (24) hours in advance of any changes in the Contractor's planned operations or critical stage work requiring Department inspection.

Progress Evaluation – Progress will be evaluated by the Engineer at the time of the monthly progress estimate relative to the Schedule of Record (SOR). The Contractor's actual progress may be considered unsatisfactory if any of the following conditions occurs:

1. The actual Total earnings to date percentage for work completed is more than ten (10) percentage points behind the cumulative earnings percentage for work scheduled; or
2. Any interim milestone or critical activity completion date is later than the scheduled completion date by more than twenty-one (21) calendar days or ten (10) percent of the contract duration, whichever is less; or
3. The projected project completion date is later than the contract completion date by twenty-one (21) calendar days or ten (10) percent of the contract duration, whichever is less.

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Progress Deficiency and Schedule Slippage – When the Contractor’s actual progress is trending toward unsatisfactory status, the Engineer will encourage the Contractor to meet to specifically and substantially discuss reversing this trend and the steps he is taking to recover satisfactory progress.

When the Contractor’s actual progress is deemed to be unsatisfactory as defined by any of the conditions listed under Progress Evaluation of this provision, the Engineer will issue a written notice of unsatisfactory performance to advise the Contractor that five (5) percent retainage of the monthly progress estimate is being withheld and will continue to be withheld as described in Section 109.08(c), for each month the Contractor’s actual progress is determined to be unsatisfactory. When the Contractor fails to respond with good faith efforts as described herein to restore satisfactory progress, the Engineer will issue a notice to indicate that he may recommend the Contractor be temporarily disqualified from bidding on contracts with the Department as described in Section 102.08 of the Specifications, if progress remains unsatisfactory at the time of preparation of the next monthly progress estimate following the Engineer’s notice. Prior to recommendation for removal from the list of pre-qualified bidders, the Engineer will allow the Contractor fourteen (14) calendar days from the date of the notice to respond. As an example of good faith efforts, the Contractor may submit to the Engineer, a proposed recovery plan in the form of a Revised Progress Schedule and a written statement to describe the Contractor’s proposed actions and timeframe to correct the progress deficiency or schedule slippage. The Contractor may also submit to the Engineer a written explanation and supporting documentation to establish that such delinquency was attributable to conditions beyond his control. Any schedule revisions resulting from a recovery plan will be reviewed in accordance with Section III, but shall not replace the current SOR.

When the Engineer determines the Contractor’s progress is again satisfactory the five (5) percent retainage previously withheld will be released to the Contractor in accordance with the provisions of Section 109.08 (c) of the Specifications.

If the Contractor is temporarily disqualified from bidding on contracts with the Department, the Contractor will not be reinstated until either the Engineer deems that his progress has improved to the extent that the work can be completed within the contract time limit or the project has received final acceptance in accordance with the provisions of Section 108.09.

V. MEASUREMENT AND PAYMENT

Category II progress schedule submittals including the baseline and any subsequent revisions requested by the Engineer as described herein, will not be measured or paid for separately. All associated costs to prepare, update, revise, and/or furnish the progress schedules for Category II projects in accordance with the requirements herein shall be considered incidental to the work.

108.03—Progress Schedule General Requirements

Delete this subsection except for the first and second paragraphs and add the following after the second paragraph:

At the Preconstruction Conference, the Contractor shall provide the Project Manager with a Baseline Progress Schedule for review, indicating at a minimum the dates for commencing and completing the Work.

108.04—Determination and Extension of Contract Time Limit

Replace this subsection with the following:

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No request for an extension of time will be considered that is based on any claim that the time limit as originally established by the Department was inadequate nor will the Department's granting or denying the Contractor's request for an extension of time relieve the Contractor of his responsibility to perform the Work in accordance with the scope and requirements of the Contract unless specifically addressed as an authorized change to the Contract.

If the satisfactory fulfillment of the Contract with extensions and increases authorized in accordance with the requirements of Sections 104.02 and 104.03 of the Specifications requires the performance of work in greater quantities than those specified in the Contract, the Contractor shall inform the Department in writing if the additional quantities require additional time to perform the work and, if so, the reason supporting such a determination and the additional amount of time requested to perform the work due to the greater quantities. The Engineer will determine if additional contract time is warranted by the greater quantities as specified in the Contractor's request. Where the Engineer determines such additional time is warranted, the amount of additional time as well as the additional quantities involved shall be specifically identified in the authorized change order to the Contract.

The Engineer may give consideration for extension of time when a delay occurs due to unforeseen causes beyond the control of and without the fault or negligence of the Contractor. However, consideration will not be given to extensions of time attributable to normal weather conditions or conditions resulting from normal weather.

During prosecution of the work, the Contractor shall identify the causes for any delays attributable to conditions he deems to be beyond his control and shall identify the particular construction operations affected, their criticality to project milestones or overall contract completion, and the significant dates that encompass the periods of delay. The Contractor shall furnish all such information necessary for the Department to make an adequate evaluation of any claim received from the Contractor for an extension of the contract time limit within three days of experiencing such a delay.

108.06—Failure To Complete on Time

(b) Liquidated Damages

Replace this subsection with the following:

All work for this Contract shall be completed and accepted on or before the time limit(s) established in the Contract. In the event the Contractor fails to complete the work by the time limit(s), liquidated damages, representing the estimated additional cost of traffic detours, administration, engineering, supervision, inspection and other expenses will be charged against the Contractor in the amounts as follows:

Liquidated damages for failure to complete the Work on time required by COMPLETION TIME LIMIT, Item 1 on Page 2 will be \$350.00* per Calendar Day**.

*For each calendar day beyond the time limit, including but not limited to Sundays and Holidays, in which the Contract remains in an incomplete state.

** Calendar Day amounts are applicable when the Contract time is expressed on the Calendar Day or fixed date basis.

SECTION 109—MEASUREMENT AND PAYMENT

Section 109 of the Road and Bridge Specifications is amended as follows:

109.01—Measurement of Quantities

(a) Measurement by Weight:

In this list item, Department shall be interpreted as the Virginia Department of Transportation.

109.08—Partial Payments

(a) General

Replace the entire list item with the following:

Partial payments will be based on a monthly progress estimate consisting of approximate quantities and value of work performed as determined by the Engineer. When the method of measurement for a contract item is in units of each or lump sum, the value of work accomplished for partial payment will be determined on a pro rata basis. Partial payments will be made once each month for the work performed in accordance with the contract requirements except when the sum of the work performed during the month's estimate period is less than \$500.00. The Contractor will be given the opportunity to review the monthly progress estimate prior to each partial payment. Upon final acceptance, one last monthly estimate will be prepared and any additional payment due will be vouchered for payment.

109.09—Payment for Material on Hand

Replace this entire subsection with the following:

When requested in writing by the Contractor, payment allowances may be made for material secured for use on the project. Such material payments will be for only those actual quantities identified in the contract, approved work orders, or otherwise authorized and documented by the Engineer as required to complete the project and shall be in accordance with the following terms and conditions:

(a) Structural Steel or Reinforcing Steel:

An allowance of 100 percent of the cost to the Contractor for structural steel or reinforcing steel materials secured for fabrication not to exceed 60 percent of the contract price may be made when such material is delivered to the fabricator and has been adequately identified for exclusive use on the project. The provisions of this section for steel reinforcement will only apply where the quantity of steel reinforcement is identified as a separate and distinct bid item for payment. An allowance of 100 percent of the cost to the Contractor for superstructure units and reinforcing steel, not to exceed 90 percent of the contract price, may be made when fabrication is complete. Prior to the granting of such allowances, the materials and fabricated units shall have been tested or certified and found acceptable to the Department and shall have been stored in accordance with the requirements specified herein. Allowances will be based on invoices, bills, or the estimated value as approved by the Engineer and will be subject to the retainage requirements of Section 109.08. For the purposes of this section

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fabrication is defined as any manufacturing process such as bending, forming, welding, cutting or coating with paint or anti-corrosive materials which alters, converts, or changes raw material for its use in the permanent finished work.

(b) Other Materials:

For aggregate, pipe, guardrail, signs and sign assemblies, and other nonperishable material, an allowance of 100 percent of the cost to the Contractor for materials, not to exceed 90 percent of the contract price, may be made when such material is delivered to the project and stockpiled or stored in accordance with the requirements specified herein. Prior to the granting of such allowances, the material shall have been tested and found acceptable to the Department. Allowances will be based on invoices, bills, or the estimated value of the material as approved by the Engineer and will be subject to the retainage provisions of Section 109.08.

(c) Excluded Items:

No allowance will be made for fuels, form lumber, falsework, temporary structures, or other work that will not become an integral part of the finished construction. Additionally, no allowance will be made for perishable material such as cement, seed, plants, or fertilizer.

(d) Storage:

Material for which payment allowance is requested shall be stored in an approved manner in areas where damage is not likely to occur. If any of the stored materials are lost or become damaged, the Contractor shall repair or replace them at no additional cost to the Department. Repair or replacement of such material will not be considered the basis for any extension of contract time. If payment allowance has been made prior to such damage or loss, the amount so allowed or a proportionate part thereof will be deducted from the next progress estimate payment and withheld until satisfactory repairs or replacement has been made.

When it is determined to be impractical to store materials within the limits of the project, the Engineer may approve storage on private property or, for structural units and reinforcing steel, on the manufacturer's or fabricator's yard. Requests for payment allowance for such stored material shall be accompanied by a release from the owner or tenant of such property or yard agreeing to permit the removal of the materials from the property without cost to the Commonwealth.

(e) Materials Inventory:

If the Contractor requests a payment allowance for properly stored material, he shall submit a certified and itemized inventory statement to the Engineer no earlier than five days and no later than two days prior to the progress estimate date. The statement shall be submitted on forms furnished by the Department and shall be accompanied by supplier's or manufacturer's invoices or other documents that will verify the material's cost. Following the initial submission, the Contractor shall submit to the Engineer a monthly-certified update of the itemized inventory statement within the same time frame. The updated inventory statement shall show additional materials received and stored with invoices or other documents and shall list materials removed from storage since the last certified inventory statement, with appropriate cost data reflecting the

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change in the inventory. If the Contractor fails to submit the monthly-certified update within the specified time frame, the Engineer will deduct the full amount of the previous statement from the progress estimate.

At the conclusion of the project, the cost of material remaining in storage for which payment allowance has been made will be deducted from the progress estimate.

Division II—MATERIALS

Comply with Division II of the Specifications as follows:

SECTION 200—GENERAL

Section 200 of the Road and Bridge Specifications is amended as follows:

200.04—Acceptance Procedures for Aggregates

Delete the first paragraph of this subsection.

200.06—Technician and Batcher Certification

Delete the word “Department” in the first sentence of this subsection and substitute “Virginia Department of Transportation.”

SECTION 217—HYDRAULIC CEMENT CONCRETE

Section 217 of the Road and Bridge Specifications is amended as follows:

217.09—Mixing

(b) Ready-Mixed Concrete

Replace the last paragraph of this subsection with the following:

Each batch of concrete, retarded or unretarded, shall be delivered to the site of work and discharged within 1 1/2 hours from the instant the cement is introduced to the mix.

SECTION 232—PIPE AND PIPE ARCHES

Section 232 of the Road and Bridge Specifications is amended as follows:

232.02—Detail Requirements

Modify and/or add the list items as follows:

(b) Cast Iron and Ductile Iron Pipe and Fittings:

2. **Ductile iron pipe** for sanitary sewers and water mains shall conform to the requirements of Class 52, cement mortar lined, standard exterior asphaltic coated with push-on joints
3. **Fittings** including, but not limited to bends, tees, crosses, reducers, caps and plugs shall be cement mortar lined and have a working pressure of 350 psi

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3. **Sanitary sewer drop connections** shall be cast or ductile iron with push on joints
- (g) **Polyvinylchloride (PVC) Pipe:**
 2. PVC gravity sewer pipe for sewer cleanouts shall conform to the requirements of SDR-35
- (k) **Copper Water Pipe or Tubing:**
 1. For 5/8-inch and 1-inch meters, water service line shall be Type K copper, soft drawn and have flared connections
 2. For 1 ½-inch and 2-inch meters, water service line shall be Type K copper, hard drawn or threaded brass

Division III—ROADWAY CONSTRUCTION

Comply with Division III of the Road and Bridge Specifications as follows:

SECTION 302—DRAINAGE STRUCTURES

Section 302 of the Road and Bridge Specifications is amended as follows:

Add the following at the end of this Section.

RESTORING EXISTING PAVEMENT

I. DESCRIPTION

This work shall consist of restoring existing pavement, removed for installation or repair of utilities such as, but not limited to pipe culverts, conduits, water and sanitary sewer items.

II. MATERIALS

Asphalt Concrete shall conform to the requirements of Section 211 of the Specifications. Aggregate Subbase material shall conform to the requirements of Section 208 of the Specifications. Asphalt Material shall conform to the requirements of Section 210 of the Specifications. Fine Aggregate shall conform to the requirements of Section 202 of the Specifications. Coarse Aggregate for surface treatment shall conform to the requirements of Section 203 of the Specifications. Hydraulic Cement Concrete Class A3 shall conform to the requirements of Section 217 of the Specifications. Steel Reinforcement shall conform to the requirements of Section 223 of the Specifications.

III. PROCEDURES

Pavement restoration shall be in accordance with this Provision and plan notes, if any. Backfill shall be in accordance with Section 302.03(a)2.g. of the Specifications. Asphalt Concrete shall be placed and compacted in accordance with Section 315 of the Specifications. Surface Treatment shall be placed in accordance with the Asphalt Surface Treatment special provision and the attached drawing. Concrete Pavement shall be placed in accordance with Section 509 of the Specifications and this special provision. Open trench in Hydraulic Cement Concrete Pavement shall be located at existing transverse joints unless approved otherwise. If concrete pavement is removed within two feet (600 millimeters) of an existing transverse joint, pavement removal shall be extended two feet (600 millimeters) beyond the joint. Reinforcing steel and dowels shall be installed in accordance with Road and Bridge Standard PR-2. Joint replacement shall be in accordance with Road and Bridge Standard PR-2.

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Contractor shall backfill trench and restore pavement structure using the plan detail titled "Pipe Bedding, Trench Backfill and Pavement Restoration."

IV. MEASUREMENT AND PAYMENT

Restoring Existing Pavement unless otherwise specified will not be measured for separate payment, the cost thereof shall be included in the price bid for the items to which it pertains in accordance with Section 302.04, Section 520.06 or Section 705.04 of the Specifications, as appropriate. However, widths and depths in excess of the attached drawing that are authorized or directed by the Engineer will be paid for in accordance with Section 109.05 of the Specifications.

SECTION 315—ASPHALT CONCRETE PAVEMENT

Section 315 of the Road and Bridge Specifications is amended as follows:

315.05—Procedures

(c) Placing and Finishing

Replace the second paragraph of this list item with the following:

On new construction projects, the edge of the pavement shall be marked by means of a continuous line placed and maintained at a sufficient distance ahead of the paving operation to provide proper control of the pavement width and horizontal alignment unless otherwise directed by the Engineer. On maintenance schedule projects, a continuous line shall not be required.

Add the following paragraph to this subsection:

Prior to application of tack coat and commencement of paving operations the Contractor shall clean the existing pavement surface of all accumulated dust, mud, or other debris that may affect the bond of the new overlay, as determined by the Engineer. The Contractor shall ensure the surface remains clean until commencement of paving operations. The cost for cleaning and surface preparation shall be included in the bid price for hot mix asphalt concrete.

Division IV—BRIDGES AND STRUCTURES

Comply with Division IV of the Road and Bridge Specifications.

Division V—INCIDENTAL CONSTRUCTION

Comply with Division V of the Road and Bridge Specifications as follows:

SECTION 512—MAINTAINING TRAFFIC

Section 512 of the Road and Bridge Specifications is amended as follows:

Add the following at the end of this section:

CONTRACTOR PROPOSED SEQUENCE OF OPERATIONS AND TRAFFIC CONTROL PLAN

The Contractor shall submit for approval by the Engineer a written and drawn sequence of operations and compatible traffic control plan providing for the safe and efficient movement of public traffic

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through or around work zones, including lane closure, road closures and detours while protecting workers, incident responders, equipment and the public.

The plan shall consist of a sketch map and at a minimum show the following:

- Proposed sequence of operations
- Proposed lane closures, road closures and/or detours
- Proposed number, type and placement of traffic control devices

WORK ZONE TRAFFIC CONTROL MANAGEMENT

I. GENERAL DESCRIPTION

This work shall consist of providing work zone traffic control management in strict compliance with the contract, plans, specifications, the latest editions of the Virginia Work Area Protection Manual and the Manual on Uniform Traffic Control Devices (MUTCD), including supervision of personnel and the installation, inspection, and maintenance of all traffic control devices on the project.

II. REQUIREMENTS

The Contractor shall assign a traffic control supervisor (TCS) to provide work zone traffic control management for the project. If the Contractor assigns more than one TCS to provide work zone traffic control management, a weekly schedule identifying who will be in charge of providing work zone traffic control management on a daily basis shall be submitted to the Project Manager by the Contractor.

The TCS shall have a set of traffic control plans and a copy of the edition of the Virginia Work Area Protection Manual specified on the plan sheet or in the contract readily available at all times.

A. Certification

Prior to commencing work requiring work zone traffic control management, the Contractor shall submit to the Project Manager a valid copy of the Traffic Control Supervisor certificate (wallet size card) issued by the American Traffic Safety Services Association (ATSSA), or another similarly accredited agency or firm approved by the Department.

The Department will accept the certification by ATSSA or any approved agency or firm only if all of the following minimum requirements are met:

1. Successful completion of an Intermediate or Advanced work zone traffic control training course approved by the Department.
2. Passing a written examination given by the agency or firm on the approved work zone traffic control training course.
3. A minimum of two years full-time field experience in work zone traffic control. The experience may be verified by the Department at its discretion.

The TCS certification shall be renewed every four years by the TCS taking and passing a recertification test. The recertification test shall be taken through ATSSA or an agency or firm approved by the Department. Recertification shall be done in the fourth year prior to the expiration date.

B. Duties

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The TCS's main responsibility shall be work zone traffic control management. The TCS may have other assigned duties on the project as approved in writing by the Engineer. The following is a listing of the TCS's primary duties:

1. The TCS(s) shall personally provide work zone traffic control management and supervision services at the project site.
2. The TCS(s) shall coordinate the training of flagging and signing personnel.
3. The TCS(s) shall supervise the flagging and signing personnel.
4. The TCS(s) shall coordinate all work zone traffic control operations for the duration of the contract, including those of subcontractors, utility companies, and suppliers, to ensure that all work zone traffic control is in place and fully operational prior to the commencement of any work.

The Department recognizes that the Contractor does not have direct control over the work zone traffic control operations of the utility companies. The coordination provided by the TCS when dealing with utility companies is for the purpose of coordinating concurrent utility work zone traffic control with any other construction/maintenance work zone traffic control to avoid conflicts.

5. The TCS(s) shall perform daily reviews of work zone traffic control when work activities are underway and document in the work zone traffic control daily diary activities taking place and any deviation from the traffic control plan, length and timing and mitigation of excessive traffic queues, and instances or conflicts or problems with the work zone traffic control and corrective actions taken. In addition, the TCS(s) shall perform weekly reviews of the work zone traffic control and document in detail using Forms TE-97001 and 97002. Every other detailed weekly review shall be performed during nighttime hours or as directed by the Engineer.

The TCS shall inspect traffic control devices in use for compliance with the ATSSA Quality Standards for Work Zone Traffic Control Devices, the Road and Bridge Specifications, and the Virginia Work Area Protection Manual. The TCS shall provide for the immediate repair, cleaning, or replacement of traffic control devices not functioning as required to ensure the safety of the motorists and construction personnel.

The traffic control devices shall be inspected by the TCS during working and nonworking hours on a schedule approved in writing by the Engineer, but as a minimum at the beginning and end of each work day or night and once during non-working weekends and holidays, and daily on restricted days due to inclement weather or during any work shutdown.

Traffic control devices in use longer than fourteen (14) days shall be inspected by the TCS at least once every other week during nighttime periods.

6. The TCS(s) shall prepare and submit statements concerning road closures, delays, and other project activities to the District Public Affairs office as required.
7. The TCS(s) shall be responsible for notifying the City's Project Manager or designee, of all accidents related to the project traffic control. The time and date of notification shall be documented in the daily diary.
8. The TCS(s) assigned to the project shall attend the preconstruction conference and any other meeting which involves traffic control.
9. The TCS(s) shall be responsible for the maintenance, cleanliness, and replacement of traffic control devices of the existing traffic control plan during working and non-working hours.

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C. Documentation - Traffic Control Diary

The TCS shall maintain a project work zone traffic control diary in a bound book. The Contractor shall provide a sufficient number of diaries for his or her use.

The TCS shall keep the work zone traffic control diary current on a daily basis, and shall sign each daily entry. Entries shall be made in ink in a format approved by the Engineer, and there shall be no erasures or white-outs. Incorrect entries shall be struck out and then replaced with the correct entry. Photographs may be used to supplement the written text.

The work zone traffic control diary shall, at all times, be available for inspection by the City's Project Manager and a copy of the diary shall be submitted to the Project Manager on a weekly basis.

The work zone traffic control diary(s) shall become the property of the Department at the completion of the project. Failure to submit the diary shall result in the withholding of final payment until the diary(s) is submitted.

D. Availability of TCS

Traffic control management shall be provided under the supervision and direction of the TCS on a 24-hour-per-day basis throughout the duration of the project.

The TCS shall be available on every working day—on call at all times—and available upon the Engineer's request during normal working hours and during other than normal working hours in the case of emergency. The provisions for availability of the TCS shall also be met during times of partial or full project suspension. Contact telephone numbers for the TCS(s) shall be provided to Department project personnel and the Engineer prior to the Contractor commencing work requiring work zone traffic control management.

E. Failure to Comply

The Engineer may suspend all or part of the Contractor's operation(s) for failure to comply with the approved "Traffic Control Plan" or failure to correct unsafe traffic conditions within 24 hours for critical items and 72 hours for non-critical items after such notification is given to the Contractor in writing.

In the event that the Contractor does not take appropriate action to bring the deficient work zone traffic control into compliance with the approved traffic control plan or fails to correct the unsafe traffic conditions, the Department may proceed with the corrective action using its own forces, equipment, and material to maintain the project and such costs, plus 25 percent for supervisory and administrative personnel, will be deducted from the money owed to the Contractor for the project.

The Contractor shall not be relieved of the responsibility to provide work zone traffic control safety to the traveling public when a project is under full or partial suspension. When a project is under suspension due to the Contractor's failure to comply with this section, or when the contract is under liquidated damages, the Contractor shall continue to provide work zone traffic control management and no additional measurement or payment will be made.

If suspensions or partial suspensions are requested by the Contractor, the additional work zone traffic control management costs will be at the Contractor's expense.

III. MEASUREMENT AND PAYMENT

Work Zone Traffic Control Management unless otherwise specified will not be measured for separate payment, the cost thereof shall be included in the price bid for the items to which it pertains. This price

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shall be full compensation for furnishing 24 hour services as specified, including preparing and furnishing Work Zone Traffic Control diaries.

When work zone traffic control management is paid for by the lump sum, monthly partial payments for work zone traffic control management will be made on a pro rata basis for the estimate period being vouchered for payment.

In the event the contract time is authorized to be extended in accordance with the provisions of Section 108.04 of the Specifications, the provisions of Section 104.02 of the Specifications will not apply. The payment for this item will be compensated on a daily basis by dividing the original lump sum bid amount by the number of calendar days in the original contract time and the resultant daily dollar value assigned to this item.

SECTION 520—WATER AND SANITARY SEWER FACILITIES

Section 520 of the Road and Bridge Specifications is amended as follows:

520.02—Materials

Modify and/or add the list items as follows:

k) Valves

Valves shall conform to conform to the following:

- Mueller A-2360 or approved equal
- Kennedy Model KenSeal II 4571RSGV or approved equal
- Open left
- Capable of being repacked under pressure either fully open or closed
- Minimum working pressure of 200 psi and a test pressure of 400 psi.
- Resilient seating, mechanical joint end connections and stainless steel bonnet nuts

(l) Fire hydrants

Hydrants shall conform to AWWA C-502, have dry barrel, Petersburg threads, 4 ½-feet bury and shall be as follows or approved equal:

- Kennedy K81-A
- Mueller A-421

(m) Water meters and yokes

Meter yokes shall be as follows or approved equal:

- 5/8" Ford #VHC 71-9W-11-33
- 1" Ford #VHC 74-10W-11-44
- 1 ½" Ford #VBB 76-12B-44-66 w/bypass valve cocked forward.

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- 2" Ford #VBB 77-12B-44-77 w/ bypass valve cocked forward.
- 5/8" and 1" Carson (formerly Brooks) #1220 Jumbo
- 1 ½" and 2" Carson (formerly Brooks) #1730

(n) Corporation stops

Corporation stops shall be Ford F600-AWWA/CC Taper Thread Inlet by Flared Copper Outlet or approved equal.

(r) Water service saddles

Water service saddles shall conform to the requirements of AWWA C-800. Saddles shall be epoxy or nylon coated iron bodies with stainless steel bolts, nuts with double straps.

(s) Couplings and fittings

Couplings shall conform to the requirements of AWWA C219. Long sleeve couplings shall be ROMAC 501 series, Ford FC2A, Smith Blair #442 or approved equal.

(t) Flushing hydrants

Flushing hydrant shall be Kupferle 2" Mainguard or approved equal.

(u) Boxes for flushing hydrants

Flushing hydrant boxes shall be Carson (formerly Brooks) #1220 Jumbo (ABS) meter box or approved equal.

(v) Valve and meter boxes

Cast iron box assemblies shall be Bingham and Taylor No. 18 with screw adjustment (18 inch to 24 inch) or approved.

(w) Tracer wire

Tracer wire shall be 12-gauge stranded or solid copper insulated high molecular weight polyethylene (HMW-PE) tracer wire. The HMW-PE insulated cover shall be green and a minimum 45 mil thick. The wire shall be UL rated for 140 °F.

(x) Pre-cast concrete manholes/structures

Manufacturer's data on pre-fabricated pre-cast concrete structures; manhole tees, bends, reducers, etc., shall be submitted to the City for approval, prior to the start of construction.

(y) Castings

Sanitary manhole castings shall be VDOT Standard F&C-1. Castings within the 100-year flood plain shall be watertight frames and covers in accordance with VDOT Standard WF&C-1. Castings in remote areas as determined by Engineer shall be vandal proof per

Bruce Avenue Drainage Improvements Phases 3&4 - Project Specifications

Capitol Foundry Standard 24" Vandal Proof Manhole Frame and Cover or approved equal.

Add the following at the end of the list items:

(x) Underground warning tape

Underground warning tape shall conform to the requirements of NTSB-PSS-73-1, and be APWA color-coded, double laminated, 5 mil polyethylene tape with a metallic core, 3 inches in width with the continuous printed message "Caution Buried Water Line," "Caution Buried Sewer Line," "Caution Buried Storm Drain Line," or other message approved by the Engineer.

520.03—Procedures

In the seventh paragraph, add the following to the end of the first sentence:

"except as approved by the Engineer."

Modify and/or add the list items as follows:

(f) Joining of Pipe:

4. Copper pipe or tubing

No splices will be allowed between water main and meter.

(g) Plugs, Caps, Tees and Bends:

A mechanical restraint system, EBAA Irons MEGALUG®, or approved equal is allowed in lieu of concrete reaction blocking and/or metal harness tie rods.

(j) Valves, Valve Boxes, and Manholes:

Water meter boxes shall be set outside the limits of roadways, driveways, parking lots, sidewalks and paved areas subject to wheel loadings whenever possible. The Contractor shall submit for approval by the City catalog cuts for meter boxes to be installed in areas subject to wheel loadings.

(n) Water Meters and Yokes:

The City shall provide and set water meters. Water meters shall be centered beneath the top flip reader of the water meter box.

(p) Sanitary Service Lateral Connection:

Sanitary sewer laterals shall be of the same material as the main to which they attach. Laterals shall be connected to the sewer main with a wye or tee fitting.

(q) Sanitary Manholes and Manhole Frames and Covers:

Sanitary sewer manholes shall have Kor-N-Seal® flexible boots or approved equal.

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Sanitary manholes shall have an internal rubber manhole frame-chimney seal installed. A rubber seal extension shall be used to cover any additional heights of chimney not covered by the seal. The rubber seal and extension shall be as manufactured by Cretex Specialty Products or approved equal, and shall be installed after completion of paving.

Connections to existing manholes shall be made by coring or saw cutting openings in manhole bases or barrels and installing a Kor-n-Seal® boot or approved equal.

(s) Sewer Cleanouts

Cleanouts shall be installed on all sanitary sewer laterals and located one (1) foot inside city right-of-way or easement boundaries. The Contractor shall furnish and install cleanouts according to the detail drawing on the Plans.

(w) Damaged Pipe

Pipe damaged by the Contractor's operations or arising from the Contractor's negligence or failure to comply with the Contract provisions shall be replaced in entire sections from main to meter as determined by the Engineer.

(x) Open Trench Limit

Unless approved otherwise by the Engineer, backfill trenches so that no more than 80 feet of excavation measured along the centerline of pipe is open at any time.

(y) Tracer Wire

Install tracer wire in all trenches for sanitary sewer and water facilities. Place the tracer wire directly over the pipe centerline and on top of the pipe zone material. Place a branch tracer wire over each pipe connected to the sewer or water mains. Wrap around hydrants, blow offs, corporation stops and other elements as directed. Make tracer wire splices using a solderless connection kit that effectively moisture seals two or more conductors for direct burial and securely join the wires both mechanically and electrically. Insulate splices to be moisture and waterproof. Splices wrapped with tape will not be accepted as waterproof. Have all splice kits approved prior to installation.

Test all tracer wire with locating equipment prior to acceptance.

(z) Underground Warning Tape

Bury underground warning tape in backfill above underground utility lines or as directed by the Engineer. Install tape between depths of 12 and 18 inches below finished grade.

520.06—Measurement and Payment

Add the following at the end of this subsection:

Tracer wire will not be measured for separate payment. Payment will be included in payment made for the appropriate items under which this work is required.

Add the following at the end of this section:

Division VI—ROADSIDE DEVELOPMENT

Comply with Division VI of the Road and Bridge Specifications.

Division VII—TRAFFIC CONTROL DEVICES

Comply with Division VII of the Road and Bridge Specifications.

STANDARD NOTES and DETAILS

- WATER and WASTEWATER Notes -
- PIPE BEDDING, TRENCH BACKFILL and PAVEMENT RESTORATION Detail -
- SANITARY SEWER CLEANOUT Detail -

CITY OF COLONIAL HEIGHTS

DEPARTMENT OF PUBLIC WORKS

NOTES:

1. ALL MATERIALS FOR WASTE WATER AND WATER SYSTEMS SHOWN SHALL BE SUPPLIED AND INSTALLED IN ACCORDANCE WITH THE LATEST SPECIFICATIONS OF THE CITY OF COLONIAL HEIGHTS APPLICABLE AT THE TIME OF NOTICE TO PROCEED.
2. FOR WASTE WATER AND WATER INSTALLATION WITHIN EXISTING CITY'S R/W; UTILITY CONTRACTORS MUST NOTIFY THE CITY WHEN INSTALLATION BEGINS SO THAT DENSITY CAN BE TESTED ON TRENCH BACKFILL (95% ASTM, D-698 @ OPTIMUM MOISTURE $\pm 2\%$).
3. THE INSTALLATION OF A WASTE WATER BACKFLOW DEVICE IS REQUIRED FOR ALL SERVICE CONNECTIONS WHERE THE FINISHED FLOOR ELEVATION IS LOWER THAN THE NEAREST DOWNGRADE AND/OR UPGRADE MANHOLE TOP ELEVATIONS. THIS DEVICE WILL BE INSPECTED BY THE BUILDING INSPECTION DEPARTMENT.
4. ALL WATER SERVICE CONNECTIONS BELOW THE ELEVATION CONTOUR OR WHERE THE PRESSURE IS GREATER THAN 60 P.S.I WILL REQUIRE INDIVIDUAL PRESSURE REGULATORS AS REQUIRED BY BOCA CODE.
5. VERTICAL DATUM IS BASED ON MEAN SEA LEVEL (USC & GS DATUM). HORIZONTAL CONTROLS ARE BASED ON VIRGINIA STATE PLANE COORDINATE GRID, SOUTH ZONE, NORTH AMERICAN DATUM OF 1983 (NAD 83).
6. CONTRACTOR SHALL PROPERLY NOTIFY ALL PROPERTY OWNERS TWO (2) WEEKS PRIOR TO THE START OF ANY CONSTRUCTION (INCLUDING LAND CLEARING). NOTIFICATION SHALL BE IN THE FORM OF A LETTER SIMILAR TO THE "SAMPLE" REFLECTED IN THE CITY'S LATEST WATER AND WASTE WATER SPECIFICATIONS (NOT-1).

REQUIRED INFORMATION FOR TITLE PAGE

APPLICANTS NAME _____
 ZONING AND CASE# _____
 NUMBER OF LOTS _____
 TAX MAP NUMBER _____
 DATE OF PLANNING _____
 COMMISSION APPROVAL _____



DRAWN BY
 DATE
 REV. 2000
 REVISIONS

STANDARD WATER AND WASTE WATER NOTES

DRAWG. NO.

DES-2



